Amendments to the Specification:

Please replace the heading preceding paragraph [0006] with the following replacement heading:

Summary of the Invention

Please replace the heading preceding paragraph [0013] with the following replacement heading:

Description of the Preferred Embodiment

Please replace paragraph **[0017]** with the following paragraph, which contains no amendments, but is provided to address the Examiner's comment that certain letters of the original text are "feint":

[0017] When patterns and waveforms are to be stored in a circuit tester as shown in FIG. 1, and the circuit tester 100 is configured such that multiple waveform memories 112, 114 are relied on to generate the sequential states of waveforms, the sequential states of the waveforms need to be de-interleaved prior to being stored in the tester's waveform memories 112, 114. Thus, for example, the first and third bits of a 4-bit waveform would need to be extracted as a 2-bit waveform to be stored in a first waveform memory 112, and the second and fourth bits of the 4-bit waveform would need to be extracted as a 2-bit waveform to be stored in a second waveform memory 114. In the past, test designers have been shielded from this extraction/de-interleaving process. Consider, however, two waveform memories capable of storing 32 waveforms each. When their outputs are interleaved, the two memories are capable of generating 1024 distinct waveforms. However, and as will be demonstrated below, if the number of waveforms derived from a test pattern is greater than 1024, and a test designer distills a list of waveforms down to fewer than 1024 waveforms, de-interleaving the list will result in 1024 entries (and not 32). Even if redundant entries in the de-interleaved lists are combined, it is still very likely that the lists will each comprise more than 32 unique waveforms. Furthermore, if the number of waveforms derived from a test pattern is greater than 1024, and a test designer needs to mask one or more waveforms on to other waveforms, it is quite possible that doing so will eliminate test sample points that could otherwise have been maintained if the test designer had first derived de-interleaved lists, and then merged duplicate waveforms in the de-interleaved lists. FIG. 2 therefore illustrates a method 200 for mitigating some or all of these problems.

Please replace paragraph **[0019]** with the following paragraph, which contains no amendments, but is provided to address the Examiner's comment that certain letters of the original text are "feint":

[0019] An exemplary list of waveforms 300 is shown in FIG. 3. The list 300 comprises three waveforms: HLHL, LHLH, and LLLL. If these waveforms are to be stored across two waveform memories, two lists of non-interleaved waveforms 400, 402 may be derived from the FIG. 3 waveforms, as shown in FIG. 4.

Please replace paragraph **[0022]** with the following amended paragraph:

[0022] The United States patent application of Hildebrant entitled "Methods and Apparatus for Optimizing the Masking of Waveforms to Reduce the Number of Waveforms in a List of Waveforms" ~~(Atty. Dckt. No. 10030556-1, filed on the same date as this application and~~(Application No. 10/686,376, which is hereby incorporated by reference) discloses methods and apparatus for masking waveform list entries in accordance with weights. For example, the number of times a waveform is encountered in a test pattern may be tracked, and this number may then be assigned to the waveform as its "statistical weight". Or, for example, the importance of a waveform being preserved is determined, and is assigned to the waveform as its "priority weight". A waveform may be deemed to have a greater priority because, for example, it is the only waveform (or one of a few) that may expose a particular fault. The use of weights in combining waveform entries is shown herein in FIGS. 6-9.

Please replace paragraph **[0023]** with the following paragraph, which contains no amendments, but is provided to address the Examiner's comment that certain letters of the original text are "feint":

[0023] FIG. 6 illustrates the same list of waveforms shown in FIG. 3, but with each entry in the list being associated with a weight. For example, the waveform HLHL has a weight of "3", indicating that it was encountered three times within a given test pattern. When the list 600 shown in FIG. 6 is de-interleaved, the weight associated with each entry in the original list 600 is associated with corresponding entries in each of the resultant non-interleaved lists 700, 702 (FIG. 7). In this manner, the weights may be multiplied by the number of test sample points appearing in their associated waveform, and choices regarding waveform maskings may be made to preserve a greatest number of test sample points (e.g., as described by the United States patent application of Hildebrant entitled "Systems and Methods for Testing Performance of an Electronic Device" (referenced *supra*)).